

CLAIMS

What is claimed is:

1. A flip chip package:
 - a lead frame having a die paddle and a plurality of leads surrounding the die paddle;
 - a chip having an active surface and a back surface opposed to the active surface, wherein the active surface has a first bonding pad and a second bonding pad; and
 - a plurality of first bumps and second bumps formed on the first bonding pads and the second bonding pads respectively, the active surface of the chip facing the lead frame and electrically connecting the die paddle and the leads by the first bumps and the second bumps respectively.
2. The flip chip package of claim 1, wherein the die paddle further comprises a first concavity formed thereon and connects to one of the first bumps.
3. The flip chip package of claim 2, wherein one of the first bumps connects the first concavity and one of the first bonding pads.
4. The flip chip package of claim 3, further comprising a first adhesive filled in the first concavity and connecting the first concavity and one of the first bumps.
5. The flip chip package of claim 1, wherein one of the leads has a second concavity connecting to one of the second bumps.
6. The flip chip package of claim 5, further comprising a second adhesive filled in the second concavity and connecting the second concavity and one of the second bumps.

7. The flip chip package of claim 1, wherein the first bumps are electrically conductive bumps.
8. The flip chip package of claim 1, wherein the second bumps are electrically conductive bumps.
9. The flip chip package of claim 1, wherein the first bumps are thermally conductive bumps.
10. The flip chip package of claim 1, wherein the first bumps are solder bumps.
11. The flip chip package of claim 1, wherein the second bumps are solder bumps.
12. The flip chip package of claim 1, further comprising an underfill filled in a gap between the active surface of the chip and the lead frame.
13. The flip chip package of claim 1, further comprising a heat spreader mounted on the back surface of the chip.
14. The flip chip package of claim 1, further comprising a heat transmission layer disposed on the back surface of the chip.
15. A flip chip package:
 - a lead frame having a die paddle, a plurality of leads surrounding the die paddle and a tie bar connected to the die paddle;
 - a chip having an active surface and a back surface opposed to the active surface, wherein the active surface has a first bonding pad and a second bonding pad;
 - and
 - a plurality of first bumps and second bumps formed on the first bonding pads and the second bonding pads respectively, wherein the active surface of the chip faces the lead frame and electrically connects the tie bar and the leads by the

first bumps and the second bumps respectively.

16. The flip chip package of claim 15, wherein the tie bar further comprises a first concavity formed thereon.
17. The flip chip assembly package of claim 16, wherein one of the first bumps connects the first concavity and one of the first bonding pads.
18. The flip chip package of claim 17, further comprising a first adhesive filled in the first concavity and connecting the first concavity and one of the first bumps.
19. The flip chip package of claim 15, wherein one of the leads has a second concavity connecting one of the second bumps.
20. The flip chip package of claim 19, further comprising a second adhesive filled in the second concavity and connecting the second concavity and one of the second bumps.
21. The flip chip package of claim 15, wherein the first bumps are electrically conductive bumps.
22. The flip chip package of claim 15, wherein the second bumps are electrically conductive bumps.
23. The flip chip package of claim 15, wherein the first bumps are thermally conductive bumps.
24. The flip chip package of claim 21, wherein the first bumps are solder bumps.
25. The flip chip package of claim 22, wherein the second bumps are solder bumps.
26. The flip chip package of claim 15, further comprising an underfill filled in a gap between the active surface of the chip and the lead frame.
27. The flip chip package of claim 15, further comprising a heat spreader mounted

on the back surface of the chip.

28. The flip chip package of claim 15, further comprising a heat transmission layer disposed on the back surface of the chip.